



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/090,415	02/27/2002	Mike Ming Liu	ZLINK.011A	6203

20995 7590 04/08/2005

Knobbe Martens Olson & Bear LLP
2040 Main Street
Fourteenth Floor
Irvine, CA 92614

EXAMINER

AMINZAY, SHAIMA Q

ART UNIT	PAPER NUMBER
----------	--------------

2684

DATE MAILED: 04/08/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/090,415

Applicant(s)

LIU, MIKE MING

Examiner

Shaima Q. Aminzay

Art Unit

2684

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 October 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-19 and 21-27 is/are rejected.
- 7) ☒ Claim(s) 20 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 February 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Response to Amendment

The following office action is in response to Amendment, filed October 25, 2004.

Claims 1-27 are pending.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 1-19, and 21-27 are rejected under 35 U.S.C.103(a) as being unpatentable over King (King, U. S. Patent 3,401,340) in view of Aboukhalil (Aboukhalil et al. U. S. Patent 6,442,378).

Regarding claim 1, King discloses transponder circuit comprising a received signal section coupled to both a first and a second comparator (see for example, Figure 1, column 2, lines 27-31, 44-48, 61-72 continued to column 3, lines 1-37, communication system power control or a booster circuit (transponder) comprising an input section (antenna 14), pilot monitor 20 (first comparator), and

a pilot monitor 18 (second comparator)).

King does not specifically teach an input signal, however, King teaches the direct connection of the comparator to the input signal through the receiver (see for example, Figure 1, receivers 10, and 12, column 2, lines 61-69, and column 3, lines 23-27).

In a related art dealing with power booster (transponder) and communication system (see for example, figure 1, lines 6-8, lines 12-15, and lines 20-24), Aboukhalil teaches the direct connection of the input signal to the comparators (see for example, figure 1, column 5, lines 8-27).

It would have been obvious to one of ordinary skill in the art at the time invention was made to include Aboukhalil's input signal to comparators with King's communication system power control circuit to provide "improved power control" booster for wireless communications system (Aboukhalil, see for example, column 1, lines 6-8, and line 24).

Regarding claim 11, King discloses a method of reducing power consumption in a transponder circuit (see for example, Figure 1, column 1, lines 65-72, column 2, lines 27-31, 44-48, lines 66-70, column 3, lines 15-21, controlling the gain and the signal deterioration reduces power consumption in a power control or a booster circuit (transponder)), comprising activating a first comparator prior to receiving a predefined signal (see for example, column 4, lines 40-48, column 6, lines 24-25, and lines 34-41, the comparator is active prior to receiving), and

activating a second comparator in response to an output from said first comparator (see for example, column 6, lines 24-25, and lines 34-41, column 4, lines 40-48, comparator response to the output from the other comparator).

King does not specifically teach the activation of the comparator prior to received signal, however, King inherently teaches the comparator is active prior to receiving the signal and comparing the received signal levels (see for example, Figure 1, receivers 10, and 12, column 2, lines 61-69, and column 3, lines 23-27).

In a related art dealing with power booster (transponder) and communication system (see for example, figure 1, lines 6-8, lines 12-15, and lines 20-24), Aboukhalil teaches the comparator is active prior to received signal (see for example, figure 1, column 5, lines 8-27).

It would have been obvious to one of ordinary skill in the art at the time invention was made to include Aboukhalil's input signal to comparators with King's communication system power control circuit to provide "improved power control" booster for wireless communications system (Aboukhalil, see for example, column 1, lines 6-8, and line 24).

Regarding claim 15, King discloses a method of operating a transponder circuit (see for example, Figure 1, column 1, lines 65-72, column 2, lines 27-31, 44-48, lines 66-70, column 3, lines 15-21, communication system power controller or a booster circuit (transponder)), comprising routing a received signal

to a first comparator which is enabled and a second comparator which is disabled (see for example, Figure 1, column 2, lines 27-31, 44-48, 61-72 continued to column 3, lines 1-4, column 4, lines 40-48, column 6, lines 24-25, and lines 34-41, communication system power control or a booster circuit (transponder) comprising an input section (antenna 14), pilot monitor 20 (first comparator), and a pilot monitor 18 (second comparator), one is enabled and the other disabled), and enabling said second comparator in response to a signal output by said first comparator (see for example, column 6, lines 24-25, and lines 34-41, column 4, lines 40-48, comparator response to the output from the other comparator).

King does not specifically teach an input signal, however, King teaches the routing of the input signal to the comparator through the receiver (see for example, Figure 1, receivers 10, and 12, column 2, lines 61-69, and column 3, lines 23-27).

In a related art dealing with power booster (transponder) and communication system (see for example, figure 1, lines 6-8, lines 12-15, and lines 20-24), Aboukhalil teaches the direct routing of the input signal to the comparators (see for example, figure 1, column 5, lines 8-27).

It would have been obvious to one of ordinary skill in the art at the time invention was made to include Aboukhalil's input signal to comparators with King's communication system power control circuit to provide "improved power control" booster for wireless communications system (Aboukhalil, see for

example, column 1, lines 6-8, and line 24).

Regarding claim 22, King discloses a transponder circuit (see for example, Figure 1, column 1, lines 65-72, column 2, lines 27-31, 44-48, lines 66-70, column 3, lines 15-21, communication system power controller or a booster circuit (transponder)), comprising: an input terminal (see for example, Figure 1, antenna (14) input terminal is connected to the receivers (10, 12) connected to the input of pilot monitors (18, 20)); a first comparator coupled to said input terminal (see for example, Figure 1, antenna (14) input terminal is connected to the receivers (12) connected to the input of the first pilot monitor 20 (first booster or transponder)); a second comparator coupled to said input terminal (see for example, Figure 1, antenna (14) input terminal is connected to the receivers (10) connected to the input of the second pilot monitor 10 (second booster or transponder)); control circuitry coupled to said first comparator (see for example, Figure 1, column 4, lines 20-23, Schmitt Trigger 44 (control circuit) connected to the first pilot monitor 20 (first booster or transponder)), and control circuitry coupled to said second comparator (see for example, Figure 1, column 4, lines 20-23, Schmitt Trigger 42 (control circuit) connected to the second pilot monitor 10 (second booster or transponder)), configured to control the operation of said second comparator by determining a validity status of a signal received from said first comparator (see for example, column 6, lines 24-25, lines 34-41, column 4, lines 40-48, comparator response to the output from the other comparator).

King does not specifically teach an input signal, however, King teaches the direct connection of the comparator to the input signal through the receiver (see for example, Figure 1, receivers 10, and 12, column 2, lines 61-69, and column 3, lines 23-27).

In a related art dealing with power booster (transponder) and communication system (see for example, figure 1, lines 6-8, lines 12-15, and lines 20-24), Aboukhalil teaches the direct connection of the input signal to the comparators (see for example, figure 1, column 5, lines 8-27).

It would have been obvious to one of ordinary skill in the art at the time invention was made to include Aboukhalil's input signal to comparators with King's communication system power control circuit to provide "improved power control" booster for wireless communications system (Aboukhalil, see for example, column 1, lines 6-8, and line 24).

Regarding claim 25, King discloses a method of making a transponder circuit (see for example, Figure 1, column 1, lines 65-72, column 2, lines 27-31, 44-48, lines 66-70, column 3, lines 15-21, communication system power controller or a booster circuit (transponder)), comprising coupling an antenna to two separate comparators (see for example, Figure 1, column 2, lines 27-31, 44-48, 61-72 continued to column 3, lines 1-4, communication system power control or a booster circuit (transponder) comprising an antenna 14 connected to the pilot monitor 20 (first comparator), and a pilot monitor 18 (second comparator)).

King does not specifically teach an input signal, however, King teaches the direct connection of the comparator to the input signal through the receiver (see for example, Figure 1, receivers 10, and 12, column 2, lines 61-69, and column 3, lines 23-27).

In a related art dealing with power booster (transponder) and communication system (see for example, figure 1, lines 6-8, lines 12-15, and lines 20-24), Aboukhalil teaches the direct connection of the input signal to the comparators (see for example, figure 1, column 5, lines 8-27).

It would have been obvious to one of ordinary skill in the art at the time invention was made to include Aboukhalil's input signal to comparators with King's communication system power control circuit to provide "improved power control" booster for wireless communications system (Aboukhalil, see for example, column 1, lines 6-8, and line 24).

Regarding claims 2 and 26, King in view of Aboukhalil teach claims 1 and 25, and further King teaches wherein said first comparator consumes less power than said second comparator (see for example, column 4, lines 40-47, the pilot monitor 20 (first comparator) covers for the low power gain, and consumes less power).

Regarding claims 12, 17, and 23, King in view of Aboukhalil teach claims 11, 15, 22, and further, King teaches wherein said first comparator consumes less

power than said second comparator (see for example, column 4, lines 40-47, the pilot monitor 20 (first comparator) covers for the low power gain, and consumes less power).

Regarding claims 3, 13, and 24, King in view of Aboukhalil teach claims 1, 11, 22, and further, King teaches wherein said second comparator operates at a higher speed than said first comparator (see for example, column 4, lines 40-47, column 2, lines 44-48, the pilot monitor 10 (second comparator) covers for the high power gain).

Regarding claim 4, King in view of Aboukhalil teach claim 1, and further, King teaches wherein said second comparator is only enabled when a predefined signal is detected at said first comparator (see for example, column 6, lines 24-25, and lines 34-41, column 4, lines 40-48, comparator response to the output from the other comparator).

Regarding claim 5, King in view of Aboukhalil teach claim 1, and further, King teaches wherein a reference voltage for said first comparator is adjustable during circuit operation (see for example, column 4, lines 20-23, comparators are adjustable).

Regarding claim 6, King in view of Aboukhalil teach claim 1, and further, King

teaches wherein a reference voltage for said second comparator is adjustable during circuit operation (see for example, column 4, lines 20-23, comparators are adjustable).

Regarding claim 7, King in view of Aboukhalil teach claim 1, and further, King teaches validating input signal in response to a signal from said first comparator (see for example, column 6, lines 24-25, lines 34-41, column 4, lines 40-48, validating input signal in response to comparator signal).

Regarding claim 8, King in view of Aboukhalil teach claim 7, and further, King teaches , wherein said second comparator is only active when said validation circuitry validates said input signal (see for example, column 6, lines 24-25, and lines 34-41, column 4, lines 40-48, comparator response to the input signal).

Regarding claim 9, King in view of Aboukhalil teach claim 1, and further, King teaches wherein valid receive signal processing is only performed on a signal produced by said second comparator (see for example, column 6, lines 24-25, and lines 34-41, column 4, lines 40-48, validating signal produced by the comparator).

Regarding claim 10, King in view of Aboukhalil teach claim 1, and further, King teaches wherein said second comparator turns off when a voltage level of

said input signal is below a voltage level of a reference voltage signal received at said second comparator (see for example, column 4, lines 40-47, second comparator turns off when input signal voltage level is below the reference voltage).

Regarding claim 14, King in view of Aboukhalil teach claim 11, and further, King teaches transponder signal processing only on a signal produced by said second comparator (see for example, column 6, lines 24-25, and lines 34-41, column 4, lines 40-48, validating signal produced by the comparator).

Regarding claim 16, King in view of Aboukhalil teach claim 15, and further, King teaches comprising operating said second comparator only after a predefined signal received at said first comparator has been validated (see for example, column 6, lines 24-25, and lines 34-41, column 4, lines 40-48, signal received by the comparator).

Regarding claim 18, King in view of Aboukhalil teach claim 15, and further, King teaches wherein a reference voltage for said first comparator is equal to a reference voltage for said second comparator (see for example, column 4, lines 40-47, the first comparator stays the same as reference level and the second comparator operating above the reference voltage level)/

Regarding claim 19, King in view of Aboukhalil teach claim 15, and further, King teaches receive signal processing only on a signal received by said second comparator (see for example, column 6, lines 24-25, and lines 34-41, column 4, lines 40-48, validating signal produced by the comparator).

Regarding claim 27, King in view of Aboukhalil teach claim 26, and further, King teaches further comprising coupling an enable input of one of said comparators to a controller in the transponder circuit (see for example, column 6, lines 24-25, and lines 34-41, column 4, lines 40-48, enabling the input of one of the comparators).

Regarding claim 20, King in view of Aboukhalil teach claim 15, and further, King teaches adjusting a reference voltage for said first comparator and a reference voltage for said second comparator in response to information received from said input signal (see for example, column 6, lines 24-25, and lines 34-41, column 4, lines 40-48, signal received by the comparator).

Allowable Subject Matter

2. Claim 21 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

3. Applicant's arguments with respect to claim 1-27 have been considered but are **moot** in view of the new ground(s) of rejection.

Conclusion

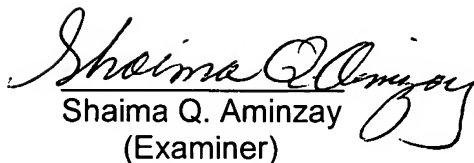
The prior art made of record considered pertinent to applicant's disclosure, see PTO-892 form.


Inquiry

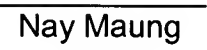
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shaima Q. Aminzay whose telephone number is 703-305-8723. The examiner can normally be reached on 7:00 AM -5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nay Maung can be reached on 703-308-7745, and the primary examiner, Nick Corsaro can be reached on 703-306-5616. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Shaima Q. Aminzay
(Examiner)


NICK CORSARO
PRIMARY EXAMINER


Nay Maung
(SPE)
Art Unit 2684

April 4, 2005